



Bureau of Safety and Environmental Enforcement

Subpart H Forum - BSEE Q and A

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"To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement."

BSEE Mission Statement

“To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.”

Subpart H Forum – BSEE Q and A

Changes to Regulations

Revisions to:
Code of Federal Regulations

Title 30 Mineral Resources
Chapter II Bureau of Safety and Environmental Enforcement
 Department of the Interior
Subchapter B Offshore
Part 250 Oil and Gas and Sulfur Operations in the Outer
 Continental Shelf
Subpart H Oil and Gas Production Safety System

Went into effect November 7, 2016

Subpart H Forum – BSEE Q and A

Exceptions

Boarding Shutdown Valves associated with subsea tiebacks and their actuators will be considered Safety and Pollution Prevention Equipment (SPPE) effective September 7, 2017.

Existing pressure and fired vessels that BSEE deems un-coded (do not have markings of the certification stamp on the name plate, the name plate is missing, or name plate is illegible) that are in use as of November 7, 2016, must be justified and receive District Manager approval by March 1, 2018.

All new firewater pumps installed after November 7, 2017 must have automatic starting capabilities upon the activation of an ESD, function bleed of a fusible loop, or function trip of other fire detection system.

Subpart H Forum – BSEE Q and A

Drawings – P&ID

BSEE will accept in a permit package a Safety Flow Diagram drawing that includes the items listed in 250.842(a)(1) as a combination document (SFD/P&ID) when conducting its safety system review.

NOTE: This should not be construed as BSEE restricting or directing industry in the current industry practices of P&ID development utilized in design, construction, and hazard analysis. These P&IDs must be maintained at a secure onshore location and readily available offshore for BSEE.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.800(b) and (c) – Design aids in industry standards

Question

Section 250.800(b) and (c) states new fixed leg platforms and floating production systems must comply with API 14J. API 14 J Table 1 lists Design Aids for process facilities systems and components. Are these design aids a requirement to meet sections § 250.800(b) and (c)?

If API RP 14J, Table 1 and Design Aids are not required by § 250.800(b) and (c), please note that the practices in Table 1 are industry practices for design, e.g., API 520 and 521 for relief system design, ANSI B31.3 etc. for piping and valves and so forth.

Answer

Table 1 in API RP 14J is an aid and provides no specific equipment requirements. Specific facility and equipment requirements are outlined in the regulations, including the standards incorporated by reference at § 250.198.

Many of the documents in Table 1 are specifically incorporated in BSEE's regulations. Although only standards incorporated by reference are regulatory requirements, at times compliance with these standards calls for satisfaction of other requirements. For example, documents that are essential in meeting the requirement of the incorporated standard should be adhered to in order to be in compliance with the regulation.

Note: The CFR citations listed in API RP 14J, Table 1 may not be accurate.

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OOC Submitted Questions

Topic

§ 250.801(a) – GLSDV

Question

Section 250.801 lists SPPE. GLSDV is noted in 250.873 but not in 250.801. What is the reasoning?

Answer

Sections 250.873(b)(1), (b)(2) and (b)(3) state that the GLSDV must meet all requirements for the boarding shutdown valve (BSDV) outlined in §§ 250.835 and 250.836. Further, § 250.835 requires that all new BSDVs and BSDVs removed from service for remanufacturing or repair meet the requirements in § 250.801. The GLSDV is the valve immediately upon boarding the host facility from a subsea well, manifold, or riser being lifted. Since USVs are allowed a leakage rate and Gas Lift Isolation valves are not required to have a leakage test done on them, the boarding valve (GLSDV) is the barrier required to be tested bubble tight thereby serving the same purpose as that of the Process Flow Boarding SDV and should be treated as such

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.801(a) – Other equipment considered SPPE

Question

Is SPPE equipment referred to in § 250.801 limited to SSV, BSDV, USV and SSSV?

Answer

No, the list is not intended to be exclusive of other types of safety and pollution prevention equipment, and other sections of the regulations may reference this section for guidance. For example: §§ 250.873(b)(1), (b)(2) and (b)(3) state that the GLSDV must meet all requirements for the BSDV outline in §§ 250.835 and 250.836, including, the requirement to satisfy § 250.801.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.801(a) – Certification requirements

Question

Are WISDV, GLSDV, and other non-hydrocarbon bearing BSDV-type valves subject to the certification requirement?

Answer

The GLSDV requirements at §§ 250.873(b) and 250.835 require compliance with §§ 250.801-250.802. Therefore GLSDVs must be certified under those regulations. However, the WISDV requirements do not reference §§ 250.801-250.803, so such equipment is not required to be certified. If any other requirements for BSDV-type valves reference §§ 250.801-250.802, then they are required to be certified.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.801(a) – Non-certified SPPE

Question

For BSDVs acquired, procured, fabricated, and installed on their respective skids prior to November 2016 when the Subpart H rules took affect for use after 2017, will these BSDVs be required to meet “certification” requirements if they lack API monogramming but were designed to meet legacy requirements in NTL No. 2009-G36? Assuming these brand new valves require no repair of any kind.

Answer

SPPE must be installed and used according to the requirements of § 250.802(d). The certification requirements for BSDVs in § 250.801(a)(2) do not take effect until September 7, 2017. At that point, pursuant to § 250.835, the requirements of §§ 250.801-250.803 apply only to new BSDVs and BSDVs removed from service for remanufacturing or repair. “[O]perators may continue to use any existing non-certified SPPE already in service unless and until it needs offsite repair, remanufacture or hot work. In addition, [because] final § 250.801 includes BSDVs as SPPEs (beginning September 7, 2017), the final rule provides that operators have until that date to come into compliance with the certification requirements for any new BSDVs; moreover, under final § 250.802(d), currently installed non-certified BSDVs may remain in service unless and until they require offsite repair, remanufacture or hot work.” Final rule preamble, 81 FR 61858.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.801(b) – Actuator certification

Question

Does the certification requirement of SPPE equipment referred to in § 250.801(b) include the actuator or is it limited to the valve?

Answer

Certification is required for the actuators as specified in §§ 250.801(a)(1), (2), and (3).

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.801(c) – Other quality assurance programs

Question

Would adherence to ISO 290001 be considered alternate compliance?

Answer

ISO 290001 may be considered as an alternative quality assurance program. This would require you to follow the requirements outlined in § 250.801(c).

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.802(a) – Inline repairs

Question

Does a BSDV that undergoes inline repairs or actuator change outs, need to meet the requirements in § 250.802?

Answer

250.801(a)(2) lists BDSV actuators as SPPE. 250.802(d)(1) and (d)(3) require the installation of certified SPPE if it is repaired offsite, remanufactured, or subject to hot work. If an actuator change out involves one of these operations (i.e., offsite repair, remanufacture, or hot work), you must install a certified actuator.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.802(a) – API Spec. 6A

Question

For § 250.802(a), does BSEE intend to apply API Spec. 6A, Specification, for Wellhead and Christmas Tree Equipment to topsides boarding valves?

Answer

API Spec. 6A applies to all BSDVs.

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.802(c) – Fire rating

Question

Does extreme condition include fire rating conditions for the valve and actuators?

Answer

The valve must be able to close and hold for a minimum of 30 minutes in a fire rating condition.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.802(c)(4) – Requalification testing

Question

Section 250.802(c)(4) requires “requalification testing performed following manufacturing design changes.” The API documents distinguish between substantive and non-substantive changes and require this requalification testing only for substantive changes.

We are seeking clarification that we do not need to perform requalification testing for minor, non-substantive changes.

Answer

Substantive changes require requalification testing. Substantive changes are those defined by API Spec. 6A and API Spec. 14A. Minor, non-substantive changes do not require requalification testing. For a design change to be considered “non-substantive” the design change must be approved by a qualified person other than the person performing the requalification testing, and records of the results will become a portion of the design documentation.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.802(c)(1) – Independent 3rd party review and certification

Question

Request clarification that this requirement applies to new equipment installed or modified after the effective date of the rule, and not to existing in-service equipment.

Answer

BDSVs and their actuators installed after Sept. 7, 2017, must be certified. 250.801(a)(2). SSVs, USVs, SSSVs and their actuators installed after Nov. 7, 2016, must be certified. 250.801(a)(1), (3), and (4). Modified equipment is addressed in § 250.802(d)(3).

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.803(a) – Failure definition

Question

Define failure as proposed - SPPE required to be reported and investigated is defined as a failure that prevents the SPPE from performing to the requirements of the functional specification or purpose whereas remediation requires offsite repair, re-manufacturing, or any hot work such as welding.

Below is from BSEE comments in Federal Register / Vol. 81, No. 173 / Wednesday, September 7, 2016 / Rules and Regulations

The final rule defines a failure as, “any condition that prevents the equipment from meeting the functional specification.” This is intended to ensure that design defects are identified and corrected and that equipment is replaced before it fails.

Answer

BSEE disagrees; 250.803(a) establishes the definition of failure with respect to SPPE reporting: “A failure is any condition that prevents the equipment from meeting the functional specification or purpose.” This is the definition of “failure” that BSEE uses.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.803(b) – Failure analysis timetable

Question

What if you shut-in to be safe but are unable to remove the valve within the 120 days?

Does “the 120-day clock start” when you notice the failure or when you retrieve the component? For example, for subsea wells, may not be able to retrieve the SSSV that quickly.

Answer

Final § 250.803(b) provides that “[y]ou must ensure that an investigation and a failure analysis are performed within 120 days of the failure to determine the cause of the failure.” Accordingly, the 120-day clock begins to run from the date of the failure. BSEE doubled the time originally proposed in order to accommodate commenters’ concerns that the proposed 60-day period was insufficient. If you need additional time beyond 120 days to perform the necessary operations, you may request a departure from BSEE.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.805(a) – H₂S and waterflooding

Question

If the reservoir is to be waterflooded, and as a consequence may become sour, does this paragraph apply?

Answer

You are required to follow § 250.490 when operating in H₂S areas. § 250.874(e) requires consideration of the effects of H₂S in the design of your waterflood system. If a reservoir becomes sour for any reason including waterflooding, you must adhere to the requirements of § 250.490(d).

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.820 – Leakage rates

Question

Section 250.820 requires surface tree valves (SSVs) to be tested in accordance with API RP 14H which allows a 400 cc/min liquid leakage rate. Section 250.834 requires subsea tree valves (USVs) be tested in accordance with API RP 14H which has the same criteria for USVs as for SSVs. The tables in § 250.880(c)(4) provide the same leakage criteria as API RP 14H for USVs but § 250.880(c)(2)(iv) specifies “If an SSV does not operate properly or if any gas and/or liquid fluid flow is observed during the leakage test, the valve must be immediately repaired or replaced.”

There appears to be a conflict between the provisions in the table and the provisions in API RP 14H. Please clarify that the API RP 14H allowable leakage rate applies for the pressure controlling aspect of the valve but “no leakage” applies for only the pressure containing aspect of the SSV as described in API RP 14H?

Answer

In accordance with § 250.800(d), when there is a conflict between the regulations and a referenced document, the regulations control over the referenced document. During monthly testing of SSVs, no leakage is allowed. The same is true for BSDVs. “Under final § 250.880(c)(2)(iv), operators must test SSVs monthly and if any gas and/or liquid fluid flow is observed during the leakage test, the operator must immediately repair or replace the valve. API RP 14H allows for some leakage during this test, however, in the final rule, BSEE requires no gas and/or liquid flow during the leakage test. As previously stated, when there is a difference between the regulations and the incorporated standards, the operator must follow BSEE’s regulations.” 81 FR at 61866.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.825(b) – Valve and sensor testing

Question

Does § 250.825(b) apply only to SSSVs and sensors related to the SSSVs, and not more broadly to all valves and sensors on a subsea tree?

Answer

All valves and sensors associated with the tree must be tested before the rig or installation vessel leaves the area. Section 250.825(b) does not only apply to SSSVs.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.826 – DWOP requirements

Question

The SCSSV needs to meet the requirements of §§ 250.801 to 250.803 and any DWOP. In the event of a conflict of regulations and DWOP, which takes precedence?

Answer

The regulations are the governing requirement, unless an alternate compliance or departure is/was requested and granted in your approved DWOP, or the DWOP approval contains a condition of approval with a more stringent requirement.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.828(b) – Definition of inoperable

Question

What is the definition of inoperable in this section?

Answer

The SSSV is considered inoperable if it is unable to perform its designed function or unable to meet the closing times and leakage rate requirements of the regulations in § 250.880.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.835(b) – Actuator failure

Question

The regulation states the BSDV must be fire rated for 30 minutes. Does this include the actuator or if the actuator fails to a safe position is that adequate?

Answer

If the actuator fails to a safe position, that is adequate.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.835(c) – BSDV location

Question

How would this paragraph be interpreted if a platform's horizontal BSDVs are within 10' of penetration but not on edge of platform?

Answer

If the proposed BSDV location does not meet the required distance specified by regulation, the company may request an alternate compliance under § 250.141 to be evaluated on a case-by-case basis, we recommend early in the design process.

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.841(a) – Safety analysis checklist

Question

This statement gives the latitude to use the Safety Analysis Checklists to not install certain equipment; however the rule has included several direct extracts from 14C as requirements with no corresponding ability to meet thru alternate means as the Safety Analysis Checklists. Examples include § 250.858 where the PSH, PSL, LSH and TSH are identified specifically without regard to the compressor type or material selected. This defaults you to an instrumented protection system rather than an inherently safe design.

Can you utilize the options provided in API RP 14C (as incorporated by reference) for the development of the Safety Analysis Checklists?

Answer

Section 250.858 requires the identified equipment only “as required in API RP 14C, sections A.4 and A.8...” Operators may utilize all options allowed by API RP 14C, including the Safety Analysis Checklists to develop their safety flow diagrams and SAFE charts.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.841(b) – Temporary repairs

Question

In the past, platforms have been approved for temporary repairs (clamps) for periods of several years. What types of temporary repairs will be allowed under the new rule? Also, please differentiate between temporary repairs for integrity issues that have leaked already vs. temporary repairs used for preventative measures.

Answer

BSEE considers pressures, type of systems, and other factors in considering requests for approval of temporary repairs to piping. It has been the policy of this agency for several years to allow temporary repairs on low pressure process piping. These temporary repairs were approved with the condition that a permanent repair would be complete within 30 days. Based on BSEE's experience, this is typically enough time to make permanent repairs. Final § 250.841(b) is consistent with this existing practice. If an operator faces issues with achieving compliance, it make seek alternate compliance or a departure under the regulations. The rule does not differentiate between categories of temporary repairs to facility piping.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842(a) – Connections or tie-ins

Question

On a modification to a facility, are you allowed to make connections with (locked closed valves with skillets installed) prior to BSEE approving the modification submittal? The regulations don't say anything about tie-ins or connections. The regulations do make it clear in § 250.842 that before you install or modify a production safety system, you must submit a production safety system application to the District Manager for approval. The regulations also could be read to suggest that you may conduct the installation prior to receiving BSEE approval, but under § 250.800 you must not commence production until BSEE approves your production safety system application and you have requested a preproduction inspection. § 250.869 When pressure or atmospheric vessels are isolated from production facilities (e.g. inlet valve locked closed or inlet blind-flanged) and are to remain isolated for an extended period of time, safety device testing in accordance with API RP 14C is not required with the exception of the PSV.

Answer

You are not allowed to make connections or install equipment prior to BSEE approval.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.842(a) – PE stamp

Question

Do P&IDs held for non-API RP 14C changes and submitted at the end of the year require a PE stamp on each cloud?

Answer

All modifications must be stamped by a registered professional engineer.

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.842(a)(3) – Electrical one-line diagrams

Question

How will electrical one-lines be addressed? Similar to minor, non API RP 14C drawings with an annual update? What would be considered “major” such that an approval is required? Are there any major changes that need to be submitted for approval?

Answer

For electrical drawings, any changes to the electrical one-line diagram will trigger a submission

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842(a) – Electrical and fire and gas systems submitted information

Question

Which documents need to be submitted to meet § 250.842(a)(3) Electrical System Information and § 250.842(a)(4) Schematics of the fire and gas-detection systems? Please provide example list.

Answer

Many of these requirements are substantively unchanged from the requirements previously located at § 250.802(e), with which operators have already been complying. For § 250.842(a)(3) the information may include, but is not limited to: Area classification drawings, One-Line diagrams, and Equipment layouts (with ignition source locations). For § 250.842(a)(4) the schematics may include, but is not limited to: a functional block diagram of the detection system, including the electrical power supply and also including the type, location, and number of detection sensors; the type and kind of alarms, including emergency equipment to be activated; the method used for detection; and the method and frequency of calibration.

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.842(a)

Question

Do the Fire & Gas loop drawings need to be submitted with the other F&G drawings as other drawings include similar information.

Answer

Please clarify question

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.842(a)(3) – Identification of potential ignition sources

Question

What does BSEE mean with “Identification of all areas where potential ignition sources are to be installed” in § 250.842(3)(ii). Is this part of (i) “Plan outlining all classified areas” and “one-line drawings”? Or is BSEE looking for a separate list with installed electrical equipment in hazardous areas?

Answer

These could be combined onto the Area Classification drawing.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.842 – Replacement in kind

Question

Does replacement in kind need to be submitted for approval?

Answer

Replacement in kind should be discussed with the appropriate district manager.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.842(b), (c), and (d) – Definition of “you”

Question

Does “you” mean the operator must certify or can the operator use a 3rd party contractor to certify?

Answer

The lessee or designated operator must certify.

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.842(c) – Certification example

Question

For preproduction certification, what minimum information needs to be provided here? Is this just as simple as “I, Joe Smith, certify that xyz was installed in accordance with BSEE approved design”?

Answer

Yes, the example is acceptable, provided it is clear that the signatory is certifying on behalf of the lessee or designated operator. That is, the certification signatory is not certifying in the signatory’s individual capacity, but rather on behalf of the lessee or designated operator.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.842 – BSEE response to certification

Question

Do we need to wait for any form of BSEE acknowledgement that this certification was received by them before we can start production?

Answer

You do not need to wait for BSEE acknowledgement to start production unless explicitly stated during the approval process provided you adhere to the conditions of 205.842(c).

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842(c), (d), and (e) – Timing of submittals to BSEE

Question

Does the installation certification need to be submitted with the as-built submittal.

Answer

No, you have 60 days after production commences to certify the as-built drawings. The installation certification statement required in § 250.842(c) is required before production commences.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842 – P.E. stamps

Question

Does BSEE accept modified documents with a PE stamp only covering the latest change, i.e. no PE stamp for original drawing?

Answer

Yes, modifications only require the clouded areas to be stamped by a registered P.E.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842 – P.E. stamps

Question

Do test spread design drawings need to be stamped by PE? Test spread is typically third party rental kit

Answer

Production test package drawings should be stamped by a registered P.E. This P.E. stamp does not need to be from an independent 3rd party. Additionally, the connections of the production test package to the existing system should also be stamped by a registered P.E. (It does not have to be the same P.E.)

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.842 – P.E. stamps

Question

Will BSEE accept drawings (P&IDs) without a P.E. stamp for as-built documents, when the original submittal to BSEE was before the compliance date?

Answer

If BSEE approved production safety system application drawings before November 7, 2016, those approvals will remain effective unless the regulations require the submission of an updated drawing (e.g., upon modification of a production safety system under 842(a)). The as-built diagram certifications under § 250.842(d) apply only to “new or modified production safety systems...”

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842 – P.E. stamps

Question

Will BSEE accept drawings without a P.E. stamp that were engineered and finalized (Issued-for-Construction) before the compliance date, but submitted to BSEE after the compliance date?

Answer

BSEE will only accept drawings without a P.E. stamp if they were submitted to BSEE prior to 11/7/16..

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842 – Changes that require a P.E. stamp

Question

What size/kind of changes need a P.E. stamp? Only the ones requiring a HAZOP? And what size/kind of changes need to be submitted to BSEE?

Answer

Any changes that require modifications to the SAFE chart or Safety flow diagram per API RP 14C would require a submission to BSEE with a P.E. stamp for those changes.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.842 – P.E. stamps for other documents

Question

Does BSEE expect P.E. stamps on any drawings other than the ones explicitly called out in § 250.842: P&ID, Safety Analysis Flow Diagram, Safety Analysis Function Chart, plan outlining all classified areas, one-line electrical drawings, and schematics of fire and gas-detection systems?

Answer

For this section, P.E. stamps are required only on the drawings identified in § 250.842(a) and their corresponding as-built diagrams.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842(b) – Definition of electrical system

Question

What is the extent of the meaning of electrical systems? To what level of detail is the Electrical System to be stamped? Does this include the reports and each individual single line, cable tray drawings etc.

Answer

Electrical systems subject to this subpart are defined in § 250.842(a)(3). All plans, drawings, diagrams, etc. of the systems defined by § 250.842(a)(3) or clouded modifications to these documents must be stamped by a registered P.E.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.842 – When to use a P.E. stamp

Question

What is meant by “mechanical systems” and to what level of detail must the mechanical design be stamped? Is this the base process design and PFDs and P&IDs or again do we go into the details of the design such as the PSV-sizing basis, design calculations and vendor supplied actual device rating calculations? What about ASME vessel, these can be purchased worldwide to ASME code? Designs for these vessels generally do not have a P.E. stamp. It is a subset of the base design.

Answer

Only drawings required by § 250.842(a) are required to be stamped under § 250.842(b)(2). Generally, this subpart does not require stamps of individual components of the mechanical systems. However there may be PE stamping requirements outside of this subpart.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.851

Question

The BSEE rule and ASME PV code are not consistent. The ASME code has additional exclusions from code stamping beyond that mentioned in BSEE requirements, thus a vessel that is exempt from ASME Section VIII, by the CFR would still need to be code stamped. For all future pressure vessel procurement, BP would have to require all pressure vessels to be designed and constructed to ASME pressure vessel code. What would be acceptable justification for operation of uncoded equipment beyond March 1, 2018?

Answer

PLEASE CLARIFY

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.851 – Maintenance of boiler and pressure vessels

Question

ANSI/ASME Boiler and Presser Vessel Code, Section I is incorporated by reference in § 250.851 and 250.1629(b). Section 250.851(a)(3) states pressure relief valves must be designed and installed according to applicable provisions in ASME Boiler and Pressure Vessel Code. The word “maintained” has been removed from the predecessor to § 250.851(a)(3). What is the requirement for maintenance? The boiler and pressure vessel code only requires testing and does not mention PSV maintenance requirements.

Answer

The ANSI/ASME Boiler and Presser Vessel Code, Section I does not specifically address maintenance. The relief valve is part of the pressure or fired vessel, so you must repair, maintain, and inspect it as part of the overall vessel according to API 510, as required in § 250.851(a)(1)(ii).

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.851 – PSV testing requirements

Question

Please clarify which PSVs fall under the annual testing requirement. Is the annual testing limited to only those PSVs that fall under API RP 14C requirements? Some PSVs fall under USCG jurisdiction are tested under USCG requirements. However, there are some PSVs on facilities that do not fall in either category.

Answer

Only PSVs that fall under API RP 14C fall under the annual testing requirements.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.851

Question

Subpart H does not contain any requirement for overhauling of PSVs. API RP 570 defines a RBI test interval for pressure relief devices. However API RP 570 is not incorporated by reference in any documentation related to pressure relief valve maintenance.

Suggestion:

Incorporate by reference API RP 570 into §§ 250.851(a)(3) and 250.1639(b)(i) for pressure relieve maintenance. API RP 570 requires relief valves in hydrocarbon services must be overhauled every 5 years and relief valves in non-hydrocarbon service must be overhauled every 10 years

Answer

BSEE will not consider operators' satisfaction of API- or manufacturer-suggested practices for testing PSVs to be sufficient for compliance with Subpart H. Previously, BSEE had allowed operators to just test the pilot of pilot-operated PSVs. This is not allowed under the new regulations, which require that the main valve piston must lift during testing. BSEE will consider granting alternate compliance requests and/or departures (extensions) for the required PSV testing (Lift Main Valve). If BSEE grants an alternate compliance request and/or departure (extension) from the requirement for the main valve piston to lift, the operator is still expected to test the pilot portion annually.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.851(a)(3)(ii) – Documents not incorporated by reference

Question

Section 250.851(a)(3)(ii) states that pressure relief valves must conform to the valve sizing and pressure-relieving requirements specified in applicable provisions of the ASME Boiler and Pressure Vessel Code incorporated by reference. However the ASME Boiler code references other documents such as API 520/521 which are not incorporated by reference. API RP 520 and API RP 521 are also referenced in Table 1 of API RP 14J.

Answer

Although only documents incorporated by reference are regulatory requirements, at times compliance with these documents calls for satisfaction of other requirements. For example, elements that are essential to the incorporated document should be adhered to in order to be in compliance with the regulation

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.852(c) – Flare scrubber sizing

Question

Section 250.852(c)(1) states that (absent equipment that satisfies § 250.852(c)(2)) you must design the flare scrubber to handle, without liquid hydrocarbon carryover to the flare, the maximum anticipated flow of hydrocarbon that may be relieved to the vessel. There needs to be a time element associated with this requirement otherwise the flare scrubber will be large and impractical. Is this requirement of flare scrubber sizing limited to the case of only when the well flow directly to a pipeline without separation on the topsides?

Suggestion:

Specify that the flare scrubber must have the capacity to contain the maximum anticipated flow of hydrocarbon for 45 second duration from the time the high-level trip in the flare scrubber is activated. The 45 seconds is based on the BSDV closure time.

Answer

Section 250.852(c)(1) does not contemplate a limitation on the duration of hydrocarbon flow that the flare scrubber must be designed to meet in the identified circumstances. Flare scrubbers should be designed for continuous flow.

Alternatively, you may meet the requirements of § 250.852(c)(2) to avoid the flare scrubber requirements of § 250.852(c)(1).

Section 250.852(c) only applies where a well flows directly to a pipeline before separation.

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

§ 250.855(b) – ESD schematics

Question

The rule requires that a schematic of the ESD, indicating the control functions of all safety devices for the platforms, must be kept on the platform, at the field office nearest the OCS facility, or at another location conveniently available to the District Manager for the life of the facility.

Is BSEE asking for a new document or will the existing SAFE chart suffice as they have much the same information? Additionally a lot of this info is duplicated on P&IDs and Cause and Effects.

Answer

No, BSEE is not asking for a new document. This is not a new regulation (see former § 250.803(b)(4)(iii)); operators can continue to comply with this requirement as they have previously. The required ESD schematic can be included in your P&ID and safe charts (or cause and effect diagram). It is not required to be a separate and unique document.

Subpart H Forum – BSEE Q and A

OOOC Submitted Questions

Topic

§ 250.872(b) – Pressure vessels

Question

Are pressure vessels operating at atmospheric treated the same way as an atmospheric vessel?

Answer

API 14C states that vessels operating at < 5 psi are considered to be in atmospheric service. Therefore this rule would apply in that case.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.874(g) – Water injection testing

Question

Do the water injection testing requirements only apply to WI systems after the effective date of the rule or do they apply to existing systems as well.

Answer

This is a testing requirement. Operators must follow this for all water injection valves, regardless of when they were installed.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.876 – Fired type heaters

Question

Section 250.876 states that the “fire tube for tube-type heaters that are equipped with either automatically controlled natural or forced draft burners” must be inspected and repaired every 5 years. The title and the content are inconsistent. Based on the text content, are we to conclude this applies only to fired type heaters and thus exclude waste heat exhaust heaters on power turbines?

Answer

That is correct. This regulation applies to fired type heaters and excludes waste heat exhaust heaters.

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.880(c)(4)(iv) – ESD logic

Question

Please clarify what is required to test the ESD logic.

Answer

Pursuant to § 250.880(c)(4)(iv), “Tested at least once each calendar month, not to exceed 6 weeks between tests – BSEE expects all Electronic ESD stations to be tested by verifying the individual ESD station signal reaches the control system(logic solver).

Subpart H Forum – BSEE Q and A

OOO Submitted Questions

Topic

§ 250.880(c)(2)(i) – PSV testing

Question

Please clarify what types of alternate compliance methods for this requirement may be acceptable. Many offshore locations are not designed to test in this manner. Design philosophies adopted over many years disallowed the installation of block valves under PSVs to eliminate the possibility of inadvertent shutting of block valves rendering PSVs out of service. BSEE/MMS over many years seemed to promote this philosophy.

Answer

There are various ways to test the PSVs and have the piston lift. If you are unable to test the PSV in a way that verifies functionality of the piston, alternate compliance requests may be considered. However, at this time BSEE does not have a basis for assessing what may be approved..

Subpart H Forum – BSEE Q and A

OOC Submitted Questions

Topic

PINC No. P-451 procedure 7

Question

Please clarify that this should only apply to PSV's installed on ASME stamped vessels. Some PSV's that fall under API 14C are protecting atmospheric vessels or process piping and these do not require PSV's that are ASME stamped.

Answer

Relief valves on atmospheric vessels do not require the ASME stamp.

Relief valves on process piping must be marked with an ASME stamp. API 14E requires that systems be designed in accordance with ASME 31.3.

Subpart H Forum

Atmospheric Vessels

§ 250.872(b) You must ensure that all atmospheric vessels are designed and maintained to ensure the proper working conditions for LSH sensors. The LSH sensor bridle must be designed to prevent different density fluids from impacting sensor functionality. For atmospheric vessels that have oil buckets, the LSH sensor must be installed to sense the level in the oil bucket.

The LSH sensor must be installed to sense the level in the oil bucket.



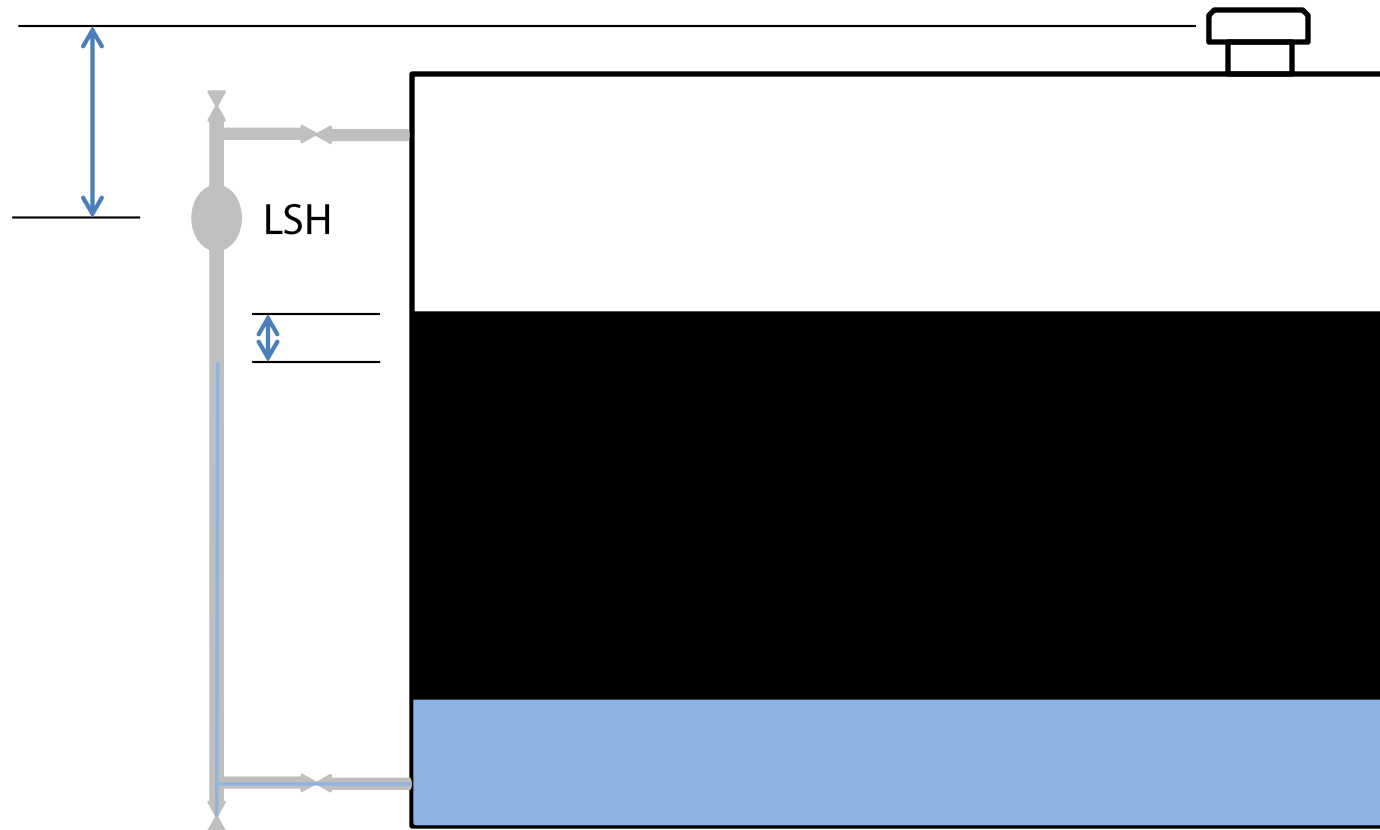
The level sensor must be installed in the oil bucket.



The level sensor may be installed in the oil bucket.

Subpart H Forum

Atmospheric Vessels – No Oil Bucket

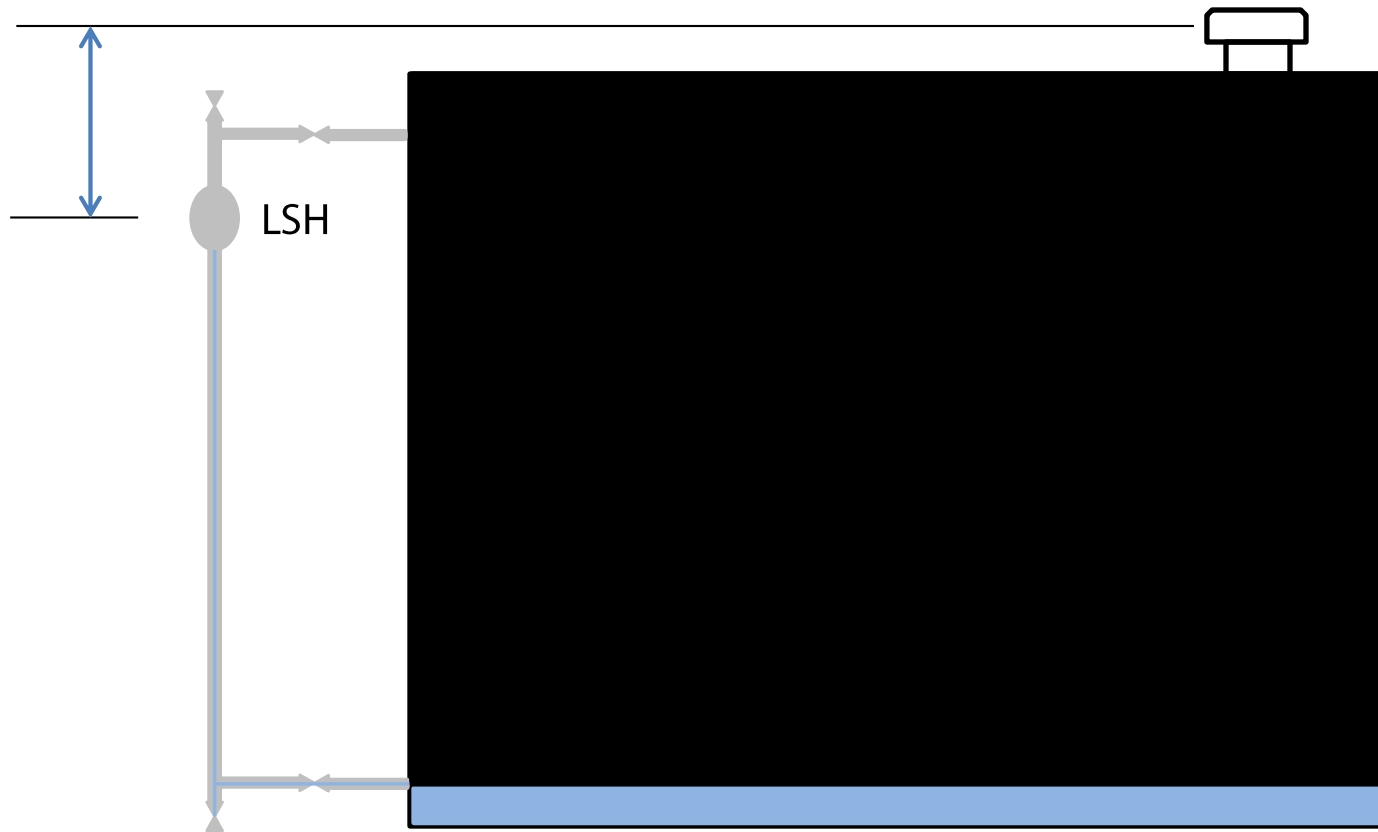


If water level in tank is not monitored and maintained, water can enter the bridge. Density Difference of oil and water can result in overflow without the bridge level reaching the LSH trip point

Subpart H Forum

Atmospheric Vessels – No Oil Bucket

Worse Case Scenario: Vessel is filled with oil and bridle is filled with water



Overflow more likely in Bad Oil tanks that do not have an overflow to good oil tank.

Subpart H Forum

Atmospheric Vessels – No Oil Bucket

Worse Case Scenario: Vessel is filled with oil and bridle is filled with water

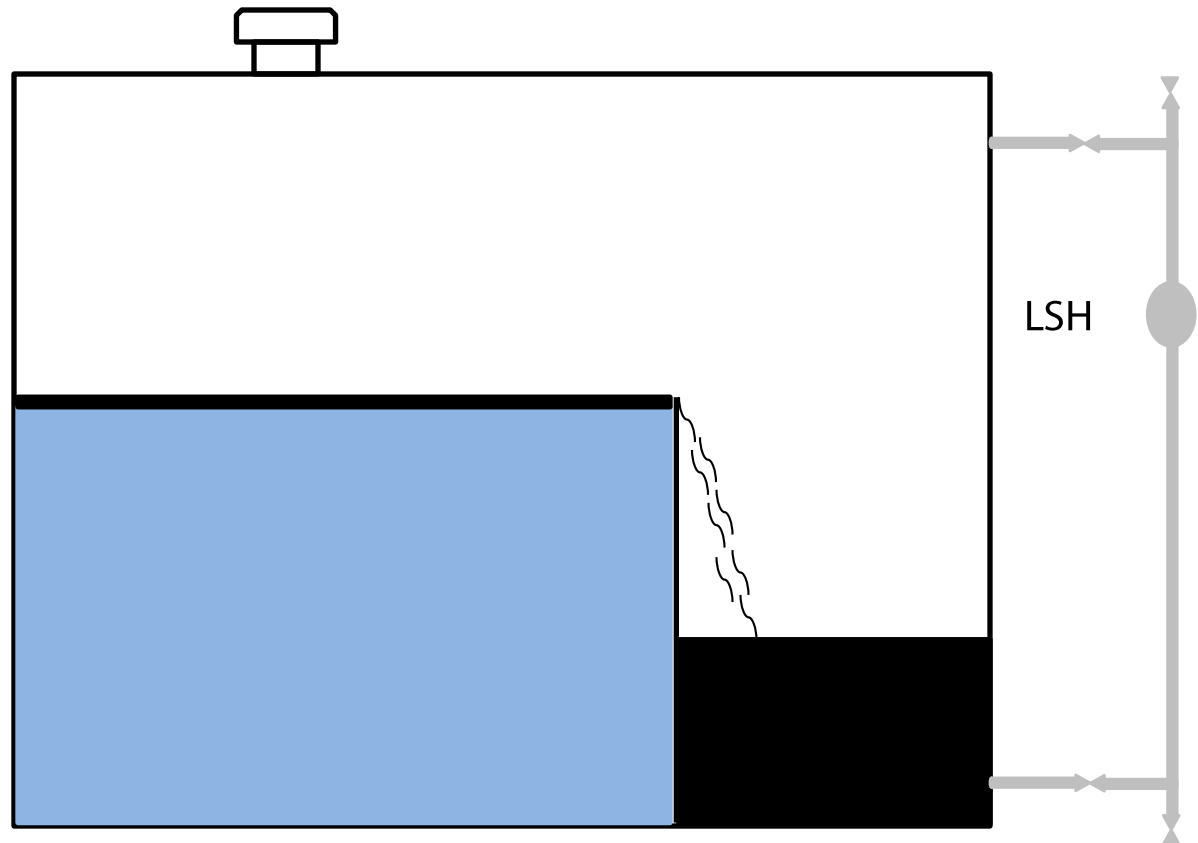


Overflow more likely in tanks that have the upper bridle enter the top of the tank. Oil is not capable of filling the bridle from the top.

Subpart H Forum

Atmospheric Vessels – With Oil Bucket

Bridle installed in oil bucket

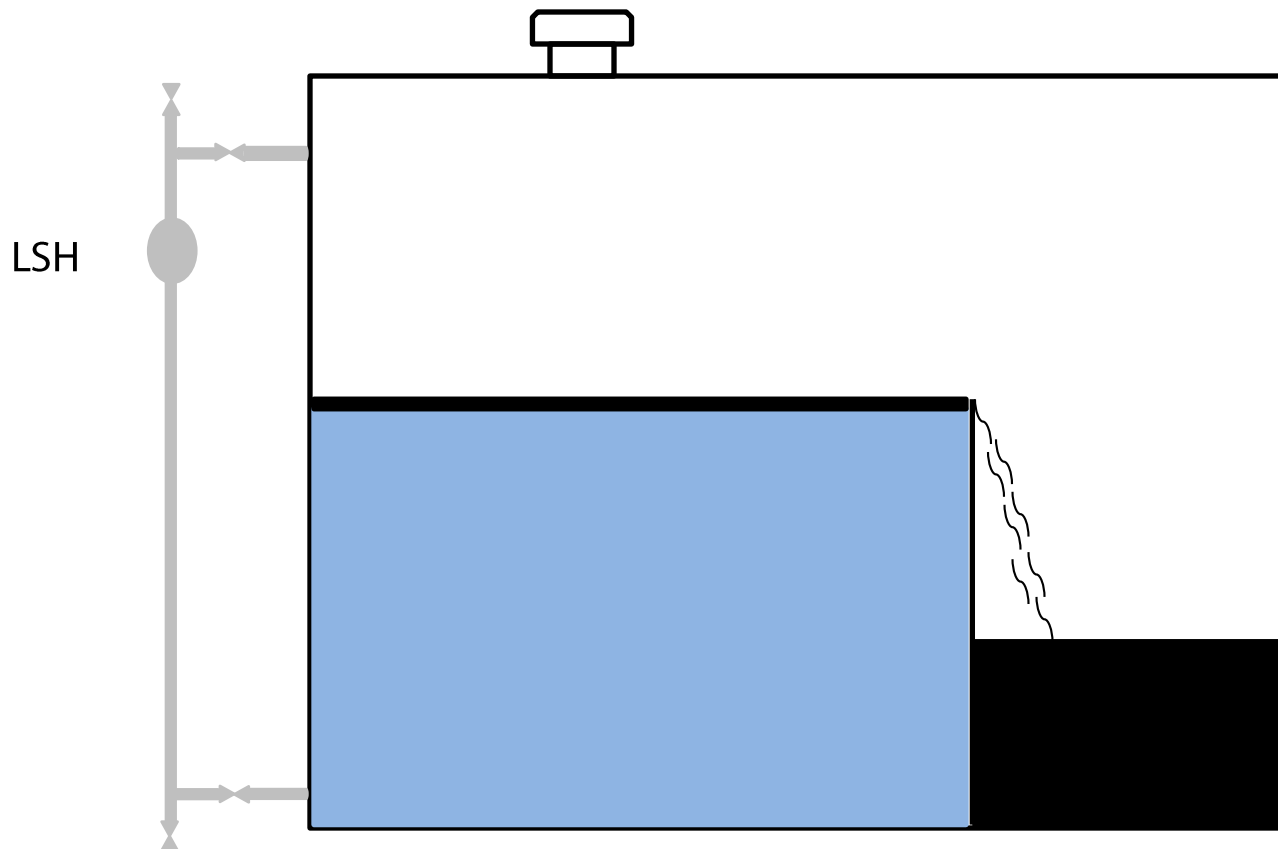


Less likely to have water enter the bottom of bridle.

Subpart H Forum

Atmospheric Vessels – With Oil Bucket

Bridle not installed in oil bucket

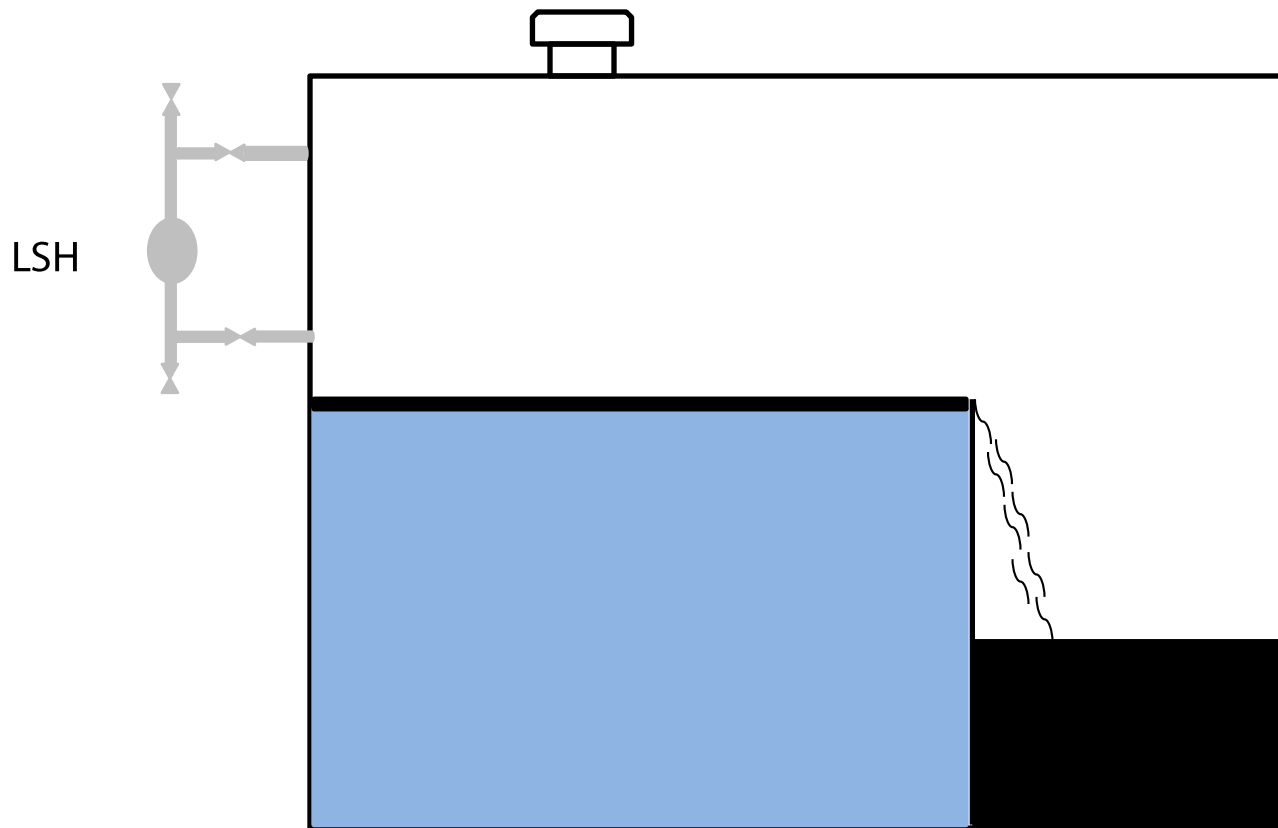


More likely to experience Density Difference issues.

Subpart H Forum

Atmospheric Vessels – With Oil Bucket

Bridle not installed in oil bucket



Not likely to experience Density Difference issues.

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